Heavy Flavor Measurements by the PHENIX Experiment at RHIC

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Heavy quark production in $p + p$ collisions can be used as as stringent test of perturbative QCD, and provide a valuable reference for the study of heavy ion collisions.

The PHENIX experiment has studied many important observables related to heavy flavor via leptonic measurements. Such observables include the invariant yield and azimuthal anizotropy of electrons from non-photonic sources, and prompt single muons, both of which are dominated by decays of D and B mesons.

Complimentary to single lepton measurements, PHENIX has measured invariant yield, azimuthal anizotropy, and polarization of various quarkonia states. Such measurements provide additional insight into heavy flavor production mechanisms.

The most recent PHENIX results will be presented, and compared to various theoretical model predictions.